

APPENDIX IV

LAND USE/LAND COVER	AREA IN HUC-11 SUBWATERSHED (ACRES)	
	020	040
Deciduous Forest	6,730	3,616
Emergent Herbaceous Wetlands	34	58
Evergreen Forest	341	141
High Intensity: Commercial/Industrial	10,968	363
High Intensity: Residential	12,868	1,310
Low Intensity: Residential	26,039	7,192
Mixed Forest	4,360	2,029
Open Water	474	1,859
Other Grasses: Urban/Recreational	5,104	576
Pasture/Hay	11,030	2,649
Row Crops	13,130	5,658
Transitional	1,204	158
Quarries/Strip Mines	223	145
Woody Wetlands	2,503	3,899
Small Grains		250
Total	95,088	29,904

Table A4-1. Land Use Distribution in Nonconnah River Watershed by HUC-11. Data is from 1992 Multi-Resolution Land Characterization (MRLC) derived by applying a generalized Anderson Level II system to mosaics of Landsat thematic mapper images collected every five years.

HYDROLOGIC SOIL GROUPS
<p>GROUP A SOILS have low runoff potential and high infiltration rates even when wet. They consist chiefly of sand and gravel and are well to excessively drained.</p> <p>GROUP B SOILS have moderate infiltration rates when wet and consist chiefly of soils that are moderately deep to deep, moderately to well drained, and moderately coarse to coarse textures.</p> <p>GROUP C SOILS have low infiltration rates when wet and consist chiefly of soils having a layer that impedes downward movement of water with moderately fine to fine texture.</p> <p>GROUP D SOILS have high runoff potential, very low infiltration rates, and consist chiefly of clay soils.</p>

Table A4-2. Hydrologic Soil Groups in Tennessee as Described in WCS.

STATION	HUC-11	NAME	AREA (SQ. MILES)	PERIOD OF OBSERVATIONS	FLOW (CFS)		
					Min	Max	Mean
07032200	08010211020	Nonconnah Creek	68.2	10/01/69-09/30/94	0.0	5,900.0	108.0
07032222	08010211020	Johns Creek	5.8	03/15/75-07/10/85	0.0	474.0	10.0
07032224	08010211020	Johns Creek	19.4	05/22/75-07/10/85	0.0	2,330.0	31.0
07032241	08010211020	Black Bayou	0.6	12/20/74-09/30/83	0.0	75.0	2.0
07032248	08010211020	Cane Creek @ East Person Ave.	5.0	12/03/74-07/06/85	1.0	506.0	11.0
07032260	08010211040	Cypress Creek @ Neely Road	3.2	02/26/75-07/09/85	0.0	360.0	5.0
07032310	08010211040	Horn Lake Creek @ Goodman, TN	49.4		0.54		

Table A4-3. Historical USGS Streamflow Data Summary Based on Mean Daily Flows in Nonconnah Creek Watershed. Min, absolute minimum flow for period of record.

PARAMETER ID	PARAMETER NAME
00010	Water Temperature (Degrees Centigrade)
00060	Flow, Stream, Mean Daily (cfs)
00061	Flow, Stream, Instantaneous (cfs)
00065	Stream Stage (Feet)
00078	Transparency, Secchi Disc (Meters)
00080	Color (Platinum-Cobalt Units)
00094	Specific Conductance, Field ($\mu\text{mhos/cm}$ @ 25° C)
00095	Specific Conductance, Field ($\mu\text{mhos/cm}$ @ 25° C)
00299	Oxygen, Dissolved, Analysis by Probe (mg/L)
00300	Oxygen, Dissolved (mg/L)
00310	BOD 5 Day @ 20° C (mg/L)
00335	COD (Low Level) in .025 N $\text{K}_2\text{Cr}_2\text{O}_7$ (mg/L)
00340	COD (High Level) in .025 N $\text{K}_2\text{Cr}_2\text{O}_7$ (mg/L)
00400	pH (Standard Units)
00410	Alkalinity, Total (mg/L as CaCO_3)
00431	Alkalinity, Total Field (mg/L as CaCO_3)
00515	Residue, Total Filtrable (mg/L)
00530	Residue, Total Nonfiltrable (mg/L)
00605	Nitrogen, Organic, Total (mg/L as N)
00608	Nitrogen Ammonia, Dissolved (mg/L as N)
00610	Nitrogen Ammonia, Total (mg/L as N)
00613	Nitrite Nitrogen, Dissolved (mg/L as N)
00619	Ammonia, Unionized (Calculated From Temp-pH- NH_4 ; mg/L)
00620	Nitrate Nitrogen, Total (mg/L as N)
00623	Nitrogen, Kjeldahl, Dissolved (mg/L as N)
00625	Nitrogen, Kjeldahl, Total (mg/L as N)
00630	Nitrite Plus Nitrate, Total (1 Determination mg/L as N)
00631	Nitrite Plus Nitrate, Dissolved (1 Determination mg/L as N)
00665	Phosphorus, Total (mg/L as P)
00666	Phosphorus, Dissolved (mg/L as P)
00671	Phosphorus, Dissolved Orthophosphate (mg/L as P)
00680	Carbon, Total Organic (mg/L as C)
00900	Hardness, Total (mg/L as CaCO_3)
00915	Calcium, Dissolved (mg/L as Ca)
00916	Calcium, Total (mg/L as Ca)
00925	Magnesium, Dissolved (mg/L as Mg)
00927	Magnesium, Total (mg/L as Mg)
00929	Sodium, Total (mg/L as Na)
00930	Sodium, Dissolved (mg/L as Na)
00935	Potassium, Dissolved (mg/L as K)
00937	Potassium, Total (mg/L as K)
00940	Chloride, Total In Water (mg/L)
00941	Chloride, Dissolved in Water (mg/L)
00945	Sulfate, Total (mg/L as SO_4)
00946	Sulfate, Dissolved (mg/L as SO_4)
00950	Fluoride, Dissolved (mg/L as F)
00955	Silica, Dissolved (mg/L as SiO_2)
01002	Arsenic, Total ($\mu\text{g/L}$ as As)
01007	Barium, Total ($\mu\text{g/L}$ as Ba)
01025	Cadmium, Dissolved ($\mu\text{g/L}$ as Cd)
01027	Cadmium, Total ($\mu\text{g/L}$ as Cd)
01034	Chromium, Total ($\mu\text{g/L}$ as Cr)
01040	Copper, Dissolved ($\mu\text{g/L}$ as Cu)

01042	Copper, Total (µg/L as Cu)
01045	Iron, Total (µg/L as Fe)
01046	Iron, Dissolved (µg/L as Fe)
01049	Lead, Dissolved (µg/L as Pb)
01051	Lead, Total (µg/L as Pb)
01065	Nickel, Dissolved (µg/L as Ni)
01067	Nickel, Total (µg/L as Ni)
01075	Silver Dissolved (µg/L as Ag)
01077	Silver Total (µg/L as Ag)
01090	Zinc, Dissolved (µg/L as Zn)
01092	Zinc, Total (µg/L as Zn)
01105	Aluminum, Total (µl as Al)
01106	Aluminum, Dissolved (µl as Al)
01147	Selenium, Total (µl as Se)
31613	Fecal Coliform (Membrane Filter, M-FC Agar at 44.5° C, 24 h)
31616	Fecal Coliform (Membrane Filter, M-FC Broth at 44.5° C)
31625	Fecal Coliform (Membrane Filter, M-FC, 0.7 UM)
31673	Fecal Streptococci, (Membrane Filter, KF Agar, at 35° C, 48h)
32211	Chlorophyll-A, Spectrophotometric, Acid, Corrected (µg/L)
39086	Alkalinity, Water, Dissolved, Field Titration (mg/l as CaCO ₃)
70300	Residue, Total Filtable (Dried at 180°C, as mg/L)
70507	Phosphorus, in Total Orthophosphate (mg/L as P)
71845	Nitrogen, Ammonia, Total (mg/L as NH ₄)
71890	Mercury, Dissolved (µg/L as Hg)
71900	Mercury, Total (µg/L as Hg)
80154	Suspended Sediment (Evaporation at 110°C, as mg/L)
82078	Turbidity, Field (as Nephelometric Turbidity Units, NTU)
82079	Turbidity, Lab (as Nephelometric Turbidity Units, NTU)

Table A4-4a. Water Quality Parameters and Codes.

PARAMETER ID	SUBWATERSHED (HUC-11)	
	020	040
00010	a,b,c,d,e,f,g,h,i,j,k,l,m	o,p,q
00061	i	
00094	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00095	a,i	
00300	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00310	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00335	a,c,d,j,m	
00400	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00410	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00515	a,c	
00530	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00610	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00619	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00630	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00665	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00900	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
00927	j	
01002	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
01027	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
01034	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
01042	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
01045	j	
01051	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
01067	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
01092	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
31616	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q
71900	a,b,c,d,e,f,g,h,j,k,l,m	o,p,q

Table A4-4b. Water Quality Parameters Monitored in Nonconnah Creek Watershed.

CODE	STATION	ALIAS	AGENCY	LOCATION
a	SHELBY208015	NONCO001.8SH	TDEC	Nonconnah Creek @ RM 2.1
b	000420	CANE000.6SH	TDEC	Cane Creek @ RM 6.6
c	001690	JOHNS000.5SH	TDEC	Johns Creek @ RM 0.5
d	SHELBY208017	NONCO020.9SH	TDEC	Nonconnah Creek @ RM 21.0
e	DAYSCREEK0.55	DAYS000.5SH	TDEC	Days Creek @ RM 0.55
f	001678	HURRI000.4SH	TDEC	Hurricane Creek @ RM 0.4
g	NONCONNAH06.9	NONCO006.9SH	TDEC	Nonconnah Creek @ RM 6.9
h	003095	TMILE000.1SH	TDEC	Tenmile Creek @ RM 0.1
i	07032200		USGS	Nonconnah Creek Near Germantown
j	001920	NONCO002.2SH	TDEC	Nonconnah Creek @ RM2.2
k	001780	LATHA000.1SH	TDEC	Latham Creek @ RM 0.1
l	NONCONNAH11.85	NONCO011.85SH	TDEC	Nonconnah Creek @ RM 11.85
m	NONCONNAH14.0	NONCO014.0SH	TDEC	Nonconnah Creek @ RM 14.0
n	477508		TVA	
o	001670	HORN000.0SH	TDEC	Horn Lake Cutoff
p	001669	HORN004.0SH	TDEC	Horn lake Creek @ RM 4.0
q	001018	CCSOU001.1SH	TDEC	Cypress Creek @RM 1.6

Table A4-4c. Water Quality Monitoring Stations in Nonconnah Creek Watershed. TDEC, Tennessee Department of Environment and Conservation; TVA, Tennessee Valley Authority; USGS, United States Geologic Survey.

FACILITY NUMBER	FACILITY NAME	SIC	SIC NAME	MADI	EFFLUENT DESCRIPTION	SUBWATERSHED
TN0000132	Hunt-Wesson, Inc.	2079	Edible Fats and Oils	Minor	Non-Contact Cooling Water, Storm Water	08010211020
TN0022322	USDSA Defense Depot	9711	National Security	Minor	Stormwater Runoff	08010211020
TN0055573	Coors Brewing Co.	2082	Malt Beverages	Minor	Non-Process Wastewater, Stormwater Runoff	08010211020
TN0055948	Cochran Corporation	2048	Prepared Animal Feed	Minor	Vapor Condenser Water, Stormwater Runoff	08010211020
TN0058831	Drexel Chemical Corp.	2879	Pesticides and Agricultural Chemicals	Minor	Non-Contact Cooling Water	08010211020
TN0059226	Williams Refining, LLC	2911	Petroleum Refining	Minor	Cooling Tower and Boiler Blowdown, Filter Backwash, Softener Regeneration, Steam Condensate, Stormwater Runoff	08010211020
TN0061182	Con-Way SW Express	4213	Trucking	Minor	Non-Process Wastewater, Stormwater Runoff	08010211020
TN0061719	Protein Technologies	2075	Soybean Oil Mills	Minor	Non-Process Wastewater	08010211020
TN0074845	Saddles Restaurant	4952	Sewerage Systems	Minor	Treated Municipal Wastewater	08010211020
TN0067351	Federal Express Corp.	4513	Air Courier Services	Minor	Non-Process Wastewater, Stormwater Runoff	08010211020
TN0072940	Memphis International Airport	4581	Airports and Terminal Services	Minor	Non-Process Wastewater, Stormwater Runoff	08010211020
TN0073181	Southern Fabricators	3714	Motor Vehicle Parts	Minor	Stormwater Runoff	08010211020
TN0073598	TN Air National Guard	9711	National Security	Minor	Non-Process Wastewater, Stormwater Runoff	08010211020
TN0073601	AMR	4581	Airports and Terminal Services	Minor	Non-Process Wastewater	08010211020

TN0074217	Memphis Light, Gas and Water-Capleville	4932	Gas and Other Services	Minor	Non-Process Wastewater	08010211020
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Table A4-5. Active Permitted Point Source Facilities in Nonconnah Creek Watershed. SIC,
Standard Industrial Classification; MADI, Major Discharge Indicator.

LOG NUMBER	COUNTY	DESCRIPTION	WATERBODY	HUC-11
97.872	Shelby	Stream Relocation, Culverts	Tributary to Nonconnah Creek	08010211020
98.388	Shelby	Culvert Extension	Tributary to Nonconnah Creek	08010211020
98.389	Shelby	Culvert Extension	Tributary to Nonconnah Creek	08010211020
98.390	Shelby	Culvert Extension	Tributary to Nonconnah Creek	08010211020
98.391	Shelby	Culvert Extension	Tributary to Nonconnah Creek	08010211020
98.562	Shelby	Wetland Fill	Wetland	08010211020
98.671	Shelby	Stream Relocation, Detention	Tributary to Nonconnah Creek	08010211020
99.134	Shelby	Stream Relocation	Tributary to Nonconnah Creek	08010211020
99.245	Shelby	Stream Relocation	Tributary to Tenmile Creek	08010211020
99.298	Shelby	Bank Stabilization	Tributary to Nonconnah Creek	08010211020
99.320	Shelby	Stream Relocation	Tributary to Johns Creek	08010211020
99.360	Shelby	Stream Relocation	Tributary to Nonconnah Creek	08010211020
99.451	Shelby	Stream Relocation	Tributary to Nonconnah Creek	08010211020
00.058	Shelby	Dredging	McKellar Lake	08010211020
98.664	Shelby	Bridge Scour Repair	Horn Lake Creek	08010211040

Table A4-6. Individual ARAP Permits Issued January 1994 Through June 2000 in Nonconnah Creek Watershed.

PERMIT #	COUNTY	DATE ISSUED	SITE	IMPACTED ACRES	IMPACTED WATER	MITIGATION	HUC-11
92.12800	Shelby	01/12/93	SR 385	Temporary	Nonconnah Ck		08010211020
93.52200	Shelby	09/20/93	Hickory Hill Rd	0.5	Wolf River	Off-Site	08010211020
94.72600	Shelby	12/19/94	Brooks Road	0.5	Nonconnah Ck	On-Site	08010211020
94.80600	Shelby	05/23/95	North of Nonconnah Ck	0.1	Nonconnah Ck	On-Site	08010211020
95.50400	Shelby	11/20/95	SE of Kirby Rd	2.0	Nonconnah Ck	Off-Site	08010211020
95.86800	Shelby	06/12/96	S of Holmes Rd	0.029	Isolated Wetland	Off-Site	08010211020
96.15300	Shelby	05/13/96	S of Shelby Dr.	0.27	Isolated Wetland	On-Site	08010211020
96.38900	Shelby			0.128	Johns Creek	On-Site	08010211020
98.39800	Shelby	10/23/98	Nonconnah Ck @ Hwy 52-A	23.5	Nonconnah and Hurricane Creeks	On-Site	08010211020
	Shelby	11/18/91	Nonconnah Parkway	5.6	Nonconnah Ck	On-Site	08010211020
	Shelby	07/05/90	Nonconnah Parkway	16.5	Nonconnah Ck	On-Site	08010211020
	Shelby	12/01/93	SR 385	6.63	Nonconnah Ck		08010211020
96.02200	Shelby	05/13/96	Frank Pidgeon Industrial Park	0.40 acres	Isolated Wetland	On-Site	08010211040

Table A4-7. Individual ARAP Permits Issued for Impacting Wetlands in Nonconnah Creek Watershed.

PERMIT #	COUNTY	IMPACTED ACREAGE	MITIGATED ACREAGE	SITE	HUC-11
92.12800	Shelby			SR 385	08010211020
94.72600	Shelby	0.5	40.0	Brooks Road	08010211020
94.80600	Shelby	0.1	0.1	North of Nonconnah Ck	08010211020
96.15300	Shelby	0.27	0.81	S of Shelby Dr.	08010211020
96.38900	Shelby	0.128	0.384		08010211020
98.39800	Shelby	23.5	74.0	Nonconnah Ck @ Hwy 52-A	08010211020
	Shelby	5.6	6.35		08010211020
	Shelby	16.5	50.0		08010211020
	Shelby	6.63	29.5		08010211020
96.04500	Shelby	0.04		Farmingdale and Kimbrough Roads	08010211040

Table A4-8. Individual ARAP Permits Issued for Mitigating Wetlands in Nonconnah Creek Watershed.